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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,029

04/26/2005

Hideo Hosono

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EXAMINER

GREEN, ANTHONY J

ART UNIT

PAPER NUMBER

1755

MAIL DATE

DELIVERY MODE

05/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,029

Applicant(s)

HOSONO ET AL.

Examiner

Anthony J. Green

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application
- ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. 2001-311801.

The reference teaches, in the abstract, a synthetic quartz glass for use in an optical device and which may be treated with an F₂ laser or an excimer lamp.

The instant claims are met by the reference. The preamble limitation of “for use with light having a wavelength of 150 to 190 nm” is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not*

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make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641. As for the limitations concerning the OH group concentration, oxygen-excess defect concentration, hydrogen molecule concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of $10\text{mW}/\text{cm}^2$ and $3\text{ kJ}/\text{cm}^2$ or after irradiation with light of an F_2 laser by 10^7 pulses at an energy density of $10\text{ mJ}/\text{cm}^2/\text{pulse}$.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. 2000-239040.

The reference teaches, in the abstract, a synthetic quartz glass for use in an optical device having 5 ppm or less of hydroxyl group, 0.1-2 mol% of hydrogen and $5 \times 10^{16}\text{ mol}/\text{cm}^3$ of fluorine. The table on page 5 recites an OH content of less than 1 ppm.

The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not*

make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641. The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration, hydrogen molecule concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of $10\text{mW}/\text{cm}^2$ and $3\text{ kJ}/\text{cm}^2$ or after irradiation with light of an F_2 laser by 10^7 pulses at an energy density of $10\text{ mJ}/\text{cm}^2/\text{pulse}$.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Specification No. 1,084,995 A1.

The reference teaches, in the abstract and the claims, a synthetic quartz glass for use in an optical device for transmitting F_2 excimer laser radiation. Examples 1-2 and Comparative examples 2 and 3 teach an OH content of less than 1 ppm.

The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as

such adds little or no patentable weight to the claim. *Ultimate intended utility does not make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641.* The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration, hydrogen molecule concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of $10\text{mW}/\text{cm}^2$ and $3\text{ kJ}/\text{cm}^2$ or after irradiation with light of an F_2 laser by 10^7 pulses at an energy density of $10\text{ mJ}/\text{cm}^2/\text{pulse}$.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. 2001-180962.

The reference teaches, in the abstract, a synthetic quartz glass for use in an optical device which contains H_2 in an amount of at least 1×10^{16} molecules/ cm^3 and up to 1 ppm of OH groups. See the table on page 5 which teaches less than 1 ppm of OH and less than 1×10^{16} molecules/ cm^3 .

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The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641.* The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of 10mW/cm² and 3 kJ/cm² or after irradiation with light of an F₂ laser by 10⁷ pulses at an energy density of 10 mJ/cm²/pulse.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. 8-48532.

The reference teaches, in the abstract and the claims, a synthetic quartz glass for use in an optical device having an OH content of less than 1 ppm (see examples 1 and 11). The hydrogen molecule concentration is less than 1×10^{17} molecules/cm³.

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The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641.* The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of 10mW/cm² and 3 kJ/cm² or after irradiation with light of an F₂ laser by 10⁷ pulses at an energy density of 10 mJ/cm²/pulse.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. 56-9230 A1.

The reference teaches, in the abstract, a quartz glass having less than 0.1 ppm of OH radical content.

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The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641.* The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration, hydrogen molecule concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of $10\text{mW}/\text{cm}^2$ and $3\text{ kJ}/\text{cm}^2$ or after irradiation with light of an F_2 laser by 10^7 pulses at an energy density of $10\text{ mJ}/\text{cm}^2/\text{pulse}$.

8. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikuta et al (US Patent No. 6,576,578 B1).

The reference teaches, in the abstract, a synthetic quartz glass to be used for light with a wavelength of from 150 to 200 nm, wherein the OH group concentration is at

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most 100 ppm, the hydrogen molecule concentration is at most 1×10^{17} molecules/cm³, reduction type defects are at most 1×10^{15} defects/cm³ and oxidation type defects are at most 2×10^{17} defects/cm³. Table 2 teaches in example 14 an OH group concentration of less than 0.8 ppm, a hydrogen molecule concentration of less than 3×10^{17} molecules/cm³ and wherein the reduction type defects are less than 1×10^{15} defects/cm³ and oxidation type defects are less than 2×10^{17} defects/cm³.

The instant claims are met by the reference. The preamble limitation of "for use with light having a wavelength of 150 to 190 nm" is an ultimate intended use and as such adds little or no patentable weight to the claim. *Ultimate intended utility does not make a composition patentable. See In re Pearson, 181 U.S.P.Q. 641.* The OH concentration meets that which is instantly claimed. As for the limitations concerning the oxygen-excess defect concentration and non-bridging oxygen radical concentration these limitations all have a lower limit or value of "0" and therefore need not be present. Further these limitations are limitations resulting after the glass is irradiated and this irradiation is not a positive claim limitation. Note that applicant recites that these limitations exist after treatment of the glass with an excimer lamp however this treatment is not specifically required by the claim as the claim is a composition claim and not a process claim. Also it is the position of the examiner that the limitations are inherent in the glass of the reference absent evidence showing otherwise as the reference does not recite the limitations after irradiation with light of an xenon excimer lamp having an energy density of 10mW/cm² and 3 kJ/cm² or after irradiation with light of an F₂ laser by 10⁷ pulses at an energy density of 10 mJ/cm²/pulse.


Information Disclosure Statement

9. The remaining references cited have been reviewed by the examiner and are considered to be cumulative to or less relevant than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Anthony J. Green
Primary Examiner
Art Unit 1755

ajg
May 5, 2007